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THE GENESEE FARMER.

SATURDAY, NOVEMBER 3, 1838.

THE DRY ROT.

In a letter from our scientific and valued correspondent R. W. H. of Buffalo, we find the following :—"Allow me to ask if your attention has ever been called to an article in Silliman's Journal for April last, 'on the Dry Rot,' by P. Rainey? I deem that paper a curious one in many respects, and one that should command attention for its new views upon a subject of the most vital importance to many of the operations of civilized life."

If the writer of that letter will turn to the 21st number of the current volume of the Genesee Farmer, he will find a notice of that number of Prof. Silliman's Journal, and a particular reference to Mr. Rainey's paper, with some of the facts and illustrations adduced by him in support of his views of that destructive fungus in wood. Not questioning the general correctness of his theory, (which maintains that in order to prevent the attack of the dry rot, and render the wood more durable, it should be cut as far from December as possible, or in other words in the middle of the summer) we felt obliged in our notice to correct a striking error into which Mr. Rainey had fallen with regard to the circulation of the sap in the maple. In allusion to some previous experiments, Mr. Rainey says, "The results of these experiments accord with a well known fact in regard to the sugar maple, namely, that no sap can be obtained from the tubes of the alburnum of that tree, and therefore they are obliged to bore the hole for the tube through the alburnum, into the heart-wood, before it will run."

We have been practically acquainted with the manufacture of maple sugar for perhaps thirty years, and in procuring sap have tried all the various modes of girdling, boxing, boring, &c., and are, as every sugar maker must be, perfectly aware, that the flow of sap first commences in the alburnum, and in procuring it multitudes only cut out a shallow chip with a gouge, which is far enough from touching the heart-wood. When the country was new, and the destruction of timber an object, we have seen large maples girdled in the spring of the year by making a spiral incision entirely around the tree, from which the flow of sap would be astonishing for a time, though as is evident from the nature of the case, the flow would be sooner exhausted than when the trees were tapped in the usual mode. It is the universal custom almost, when the flow of sap from the first boring or opening begins to decrease, to deepen it by farther boring or cutting, which is followed by a new flow of sap. Sugar makers, or the owners of maple orchards, are always careful in the spring of the year to avoid the slightest injury to the alburnum of their trees, as it occasions a flow of sap, and a consequent loss, as well as an injury by wounding the tree.

Our correspondent adds the following queries:—"By the way, of this same Dry Rot—why is it that the furniture of our houses is not attacked by it as well as wood in other situations? The frames of our buildings are. Will it be said varnish preserves this wood, or paint? This will not do; for in the first place, it is not yet shown that varnish or paint is a preventive, and 2d, these substances cannot cover all the surface; while many articles, as cheap kitchen chairs, plain bedsteads, &c. are not covered in *any part.*"

We do not imagine that the cause of dry rot is yet fully understood, though there is a considerable degree of plausibility, to say nothing more, in the theory of Mr. Rainey. We have seen the beams of a house attacked by the rot, but the furniture never; still unless the time of the cutting in both cases could be ascertained nothing could be proved from this fact. We have also seen posts, beams and other timbers, that were what is called powder posted, but articles of furniture are rarely or never so attacked. In the first case, we have attributed exemption from rot to the total absence of all moisture in the furniture; while the larger masses of the lumber, by absorbing and retaing moistare more readily, were more exposed to the attacks of this fungus. In the latter case the attacks of the insect that is the cause of powder post, was prevented by the situation, or the use of the furniture. It has we think been demonstrated that no vegetable, (and the dry rot is clearly a vegetable fungus,) can exist without some degree of moisture, either in its commencement or progress, and in the case of dry rot, when commenced, the wood can scarcely be made dry, such is the seeming affinity of this fungus for moisture. The progress of the dry rot is always the most rapid and fatal in situations where the timber is most exposed to the damp sand in unventilated places, such as cellars, ship timbers, &c.

It is very possible, that the position or quantity of sap in the tree at the time of cutting it, as maintained in the theory of Mr. Rainey, may have a decided influence in accelerating or preventing the progress of the dry rot; but in the case of his argument, we consider his premises as not sufficiently established to warrant the positive inferences Mr. Rainey appears to have done. More experiments, and those of a character not so liable to error, as Mr. Rainey himself suggests, we think are needed, before the cause, and consequently a preventive, of the dry rot can be confidently announced. A series of experiments are now in progress at Woolwich in England, which may develop important facts in relation to this matter. In the mean time, whenever the dry rot appears, let the time the timber was cut if possible be ascertained; it is from the accumulation of facts that correct and of course useful theories, can be deduced. In no part of our country, certainly not in the interior, is there a place more favorable for observations of this kind than Buffalo. The great extent of steamboats, ships, and boat building, and repairing, carried on at that place, as well as ordinary building, offer to the enquirer into the causes of decay in timber, advantages which should not be overlooked. If unable to devote the necessary time to this purpose himself, our correspondent may, by directing to this point the notice of competent observers, render the science and to the country essential aid. We hope he will think of it.

American Institute and Journal.

The September number, being the last of the third volume, is now before us, and we take a pleasure in calling the attention of the public to this excellent Journal, as well as to the society of which it is the accredited and ably conducted organ. We do this with the greater pleasure, as all the former fairs of the Institute which have been got up with so much skill, and which have produced such excellent results, seem to have been eclipsed by the one of the present month, and which we shall endeavor to notice more fully hereafter, when the proceedings are more fully laid before the public by the annual report of the Institute.

We recommend this body, and their Journal, to the favorable notice of the public, because their career from the first, though unostentatious, has been such as every American must approve. To elicit American mechanic, manufacturing, and agricultural talent and skill; to foster and encourage domestic manufactures; to infuse into our citizens the spirit of enterprise and industry; to discourage speculation and honor labor; to bring to the notice of the farmer the most improved implements, and the best animals; in short to render this country truly independent, by developing its own immense resources, has been the grand aim of the Institute and the Journal. This they have already done much to effect, and as their course is onward we expect still more from their labors.

That a body of enlightened men, acting with zeal and energy, and for the most praiseworthy purposes, should produce an effect on the public mind, and their counsels be listened to with deference, will not appear at all surprising. The great interest which is felt in this coutry at the present moment on the subject of silk, and which promises to render the United States the greatest silk producing country on the globe, owes much of its origin and spread to the labors of the Institute. The first Morus multicaulis, that tree so invaluable to the silk grower, ever introduced into this country, was brought from Paris by Dr. Pascalis, and planted in the Cedar street Church-yard in New-York. There are now, (and we make the assertion on the best authority, that of Gen. Tallmadge, who has visited almost every part of Europe,) more valuable mulberry trees growing in the U. S. than in all that country.

The law for a geological survey of the state, which is now so honorably progressing, which has already, by checking unfounded expectations, and preventing useless expenditures, and discovering and developing the immense mineral resources of some sections or the state, benefitted us to an extent we are as yet but poorly prepared to estimate, owes in a great measure its conception and passage to a committee of the Institute. The impulse given to the iron manufacture alone by the discoveries of this survey, will annually save us millions. In the prosecution of internal improvements, the Institute have taken an active interest. In the enlargement of the Erie canal; in the construction of the Genesee Valley canal, which, as forming a most important link in the chain connecting New York and the lakes with the Ohio, has always been a favorite object with them; their co-operation has been active and efficient. Their views on this subject are expressed in the report of Mr. Ruggles to the last legislature; a report which has elicited more approbation and received more notice both at home and abroad for its comprehensive and statesman-like views, than any report made in our country for years. A fair and just, not burdensome, protection to the pursuits of American agriculturists, mechanics, and manufacturers, in the shape of a tariff, has always received the decided support of the Institute; and indeed it is somewhat difficult to conceive how the entirely unprotected and defenceless can sustain themselves in a conflict against those who are protected by law at every vulnerable point. All America asks is fair play. She is willing to 'give equal ground and one to begin with,' to any European nation, and will then win the race; but the odds may be too unequal; and the difference between the ample and complete protection given there, and the little or none at all contended for here, is sufficient to account for many of the commercial and financial embarrassments under which we have so lately suffered.

We are happy to state that the library of this institution is fast increasing by donations of valuable books; and all such will always be thankfully received; the number now is about 4,000 volumes. In some former remarks on the subject of a National Agricultural Association, we proposed to the American Institute, as a proper nucleus, around which such a society might be readily organised, as most of the materials, such as Repository of agricultural implements, officers for superintending and managing, &c. &c. were all ready. As a central position, New-York is and must be unrivalled, and New York, if she is to remain the Empire State, and retain her proud supremacy *must* be the first agricultural as well as commercial state in the Union. So far as we have noticed our proposition has been received with decided approval, and we cannot but hope, that that, or a similar proposition, will ere long be carried into full and beneficial effect.

The Repository of Implements, and the office of the In-

stitute, is at 187 Broadway, New York. Farmers, mechanics and manufacturers; in short, all who take an interest in the objects of the Institute, should pay the Repository a visit. The Journal of the Institute is published monthly at the same place, 50 pages octavo at $4 00 per annum. T. B. Wakeman, publisher.

SMOKING WITH SULPHUR.

In England the fumigation of plants with sulphur, to destroy plant-lice, aphides, the turnep fly, insects on trees, where the top could be covered or exposed to the suffocating fumes, has been for some time practiced with great success. To most animals and insects the fumes of sulphur are almost instantly fatal. The *rationale* appears to be this. The smoke of sulphur immediately combines with water when brought in contact with it; and in this way, by combining the smoke of sulphur in leaden chambers with water that covers the floor, and is frequently agitated, the sulphuric acid of commerce is formed. Thus when the fumes of sulphur are brought in contact with the moist surface of the lungs, or breathing vessels of animals or insects, sulphurous acid is usually generated, and the lungs refusing to act under such circumstances, suffocation is produced. Of this, any one can easily satisfy himself by experiment.

Taking the hint from these facts, it was proposed to attempt the suffocation or destruction of the wheat fly or grain worm by fumigation on its first appearance, and we are happy to learn it has been tried the present season with entire success. It is stated in the Amsterdam paper, (a Journal on the Mohawk in Montgomery county,) that a farmer in Herkimer has preserved a large wheat crop from the worm the past season, by using brimstone in fumigation liberally, while all around him who did not adopt this preventive, had their crops seriously injured or destroyed. The brimstone was prepared by melting, and in this strips of old woolen cloth were dipped. These fixed on sticks, and fixed in different parts of the field, were set on fire, generally at evening. The matches were given in the greatest numbers to the windward side of the fields, and the offensive and destructive smoke was of course driven over every part, proving fatal to the insect that inhaled the gas. About 100 pounds of brimstone were used to 100 bushels of sowing, and the preservation was complete; thus proving, in this instance at least, a remedy equally cheap and efficacious.

THE DROUTH.

The extreme hot and dry weather of August and September appears to have operated very injuriously on the crops of large sections of the country, as well as exposed the inhabitants of those parts subject to fevers, to severe attacks of diseases of that nature. Judging from observation, and from multiplied reports in the newspapers, it would seem that the effects of the drouth have not been equally felt in all parts of the country, or even of this state. Thus in the western district of New-York the elevated parts have suffered much less than the north; the frequent showers having kept the pastures comparatively green, und the root crop from being so fatally dried up as they have in some places. Pennsylvania and Ohio appear to have been longer without rain, than any other of the northetn states, and the loss has been in proportion. The drying up of the pastures, in the former, and the almost entire destruction of the potato crop in the south and central parts of the latter, has already produced a sensible effect on the price of beef and of pork in the cities of those states, and has had the effect of putting a stop in a great measure to the cattle trade of the northern counties of Pennsylvania, and the southern ones of New York. A letter from an intelligent farmer of Susquehanna to us, of the date of October 14, says—"The graziers near the city (Philadelphia) have suddenly found themselves by the unexpected and severe drouth, unable to fat the store cattle purchased by them last season, and will be scant of fodder to feed them this winter. The consequence has been that drovers from this neighborhood, have been compelled to return with their droves, or sell them at a ruinous sacrifice. There has been as many as six or seven hundred head returned into this county from the south eastern market, within six weeks; and many who had sold to drovers have been compelled to keep what they had agreed to part with. This to our farmers is a great disappointment; for although we have fodder in abundance, we had calculated upon selling considerable quantities of both cattle and provender. There are many around me, who in anticipation of sales, have kept their calves, and are raising from 20 to 30 besides their other young stock." Our correspondent adds,—"We have not as yet seen or known any thing of the grain worm, although many fears are entertained of its approach."

Tuscany and Poland Wheat.

Col. W. T. Cuyler, of Woodlands, on the Genesee river, Livingston county, has sent us a sample of wheat, and the straw, of two new kinds. He writes us that "7 lbs of the imported seed was sowed on the 18th September, 1837, and harvested on the 14th July, 1838, yielding 180 lbs. from that quantity of seed, from one-twelfth part of an acre, the soil clay, sowed after corn, once ploughed and three times dragged. In the parcel sowed, there were four distinct kinds, which I have carefully separated."

The sample of wheat sent us, and which he calls *Tuscany*, is of a firm and very long berry, white and thin skinned; it is larger than any variety we have seen, except a kind imported from England last year for spring wheat, as the *Talavera*, and which turned out a winter wheat. The straw of Col. Cuyler's wheat is large, strong and most beautiful color. The unthreshed head sent us, called the *Poland*, is one of the most splendid specimens of wheat ever produced, the regularity in which the houses are set, and the closeness of kernels give it the appearance of braided silk—very much like some varieties of Barley. The sample contains 11 setts or houses, and is one inch shorter than the white flint, or red chaff, containing the same number of setts; it is bearded like barley, which with the chaff is white. Mr. Warham Whitney of this city, received from Eli Hart & Co. of New York, a sack of wheat as the Tuscany, which he sowed last fall. It proved nothing particularly desirable or uncommon, except two kinds of the same varieties, sent us by Col. C., one kind has a dark chaff and a *blue black* beard, and the other the same as the first named samples. Their appearance was so peculiar that Mr. W. hand picked it and has sown it by itself, with the intention of proving its value, which experiment we shall keep in our eye and not fail of advising our readers of the result.

The agricultural world for several years past have been all agog in producing new varieties of corn, potatoes, turneps, beets, &c. &c. In a great wheat growing country like ours, there can be no greater or praiseworthy act, than to produce, or discover, new and more desirable varieties of wheat, that kind for exanple, that gives the greater produce, and at the same time least liable to winter kill, rust, and produce smut. If observing farmers would follow the same rule recommended for improving seed corn, by observing the longest heads, possessing any peculiarity of form, and multiplying them by sowing separate a few times, they might render the world a greater benefit than all the speculations and hobby-horse riders of the present generation. We know a person who from one spoonful of a very singular variety of spring wheat, has now 60 bushels, which will shortly be introduced to the public, and from which we predict some very desirable results, by producing a spring wheat that shall give a greater produce and whiter flour than any kind now known.

We invite the attention of the reader to an article from Silliman's Journal, translated from the French by our correspondent Mr. Hawkins of Buffalo. It is interesting, as developing very clearly, the successive changes this earth has undergone to fit it for the residence of man. The evidence thus furnished to the truth of the Mosaic records (not to the commonly received interpretation of them) by the geological, zoological, and botanical remains of former ages, is not one of the least gratifying results of the progress of Science. The remark that coal is doubtless the result of bituminized vegetables has received positive confirmation from the researches of Dr. Jackson, the geological surveyor of Maine, who observed in a bed of peat vegetable matter in all its stages from the plant, to actual bituminization. On the first appearance of this paper we concluded to present an abstract of it to the readers, but its general interest, and the manner in which the several facts are interwoven, rendered it impossible to do it justice in that way, and we give it entire. Brongniart has done for fossil vegetables, what Cuvier has done for fossil zoology, and Buckland for geology. Every man whose business is with the earth, should be in possession of all the information that throws light on the structure of the earth he treads, or the nature of the soil he cultivates.

From Siliman's Journal of Science and Arts.

ART. VI.—CONSIDERATIONS UPON THE NATURE OF THE VEGETABLES THAT HAVE COVERED THE SURFACE OF THE EARTH, AT DIFFERENT EPOCHS OF ITS FORMATION; *read before the Academy of Sciences of Paris, on the 11th September*, 1837, by Mons. Adolphe Brongniart.

[Translated from the French, and communicated for this Journal, by R. W. HASKINS, of Buffalo, New-York.]

Curiosity is one of the most distinctive faculties of the human mind; one of those that most clearly mark the distance between man and the brute creation; and for this reason it may be designated one of most noble faculties, whenever directed to any end really worthy of his being.

It is this which continually excites us to extend the field of our knowledge, and to fathom the most hidden mysteries of nature, without being able to hope, for the most part, any other reward than the good which will result to all intelligent beings, in proportion as they are able to form ideas more exact upon the nature of the phenomena which surround them. These phenomena appear the more difficult of investigation in proportion as, by their nature and position, they are farther removed from our direct observation; and in like manner we are struck with the results to which profound researches have conducted those men who have made these investigations the object of their studies.

The invention of the telescope, by opening to our view what is passing in the elongated regions of space; and of the microscope, by revealing to us the existence of numberless beings so minute as, but for this instrument, would forever have escaped our observation, have made, upon the human imagination, the most vivid impression.

The sciences have made such rapid advances, within late years, that no one can reasonably expect to open new views and to disclose new truths equally exciting to human curiosity as those disclosed by the telescope and the microscope; but still, the study of the soil upon which we daily tread, has become, within the last half century in the hands of Werner, of Cuvier, and the crowd of learned and able men who have assiduously followed these illustrious pioneers, one of the sciences the most fruitful in results, not only of high interest to the professionally learned, but well calculated vividly to interest the imagination of all persons who love to reflect upon the great phenomena of nature.

In investigating the layers which compose the superficial strata of the earth, their order of superposition, their nature, and the animal and vegetable remains which they contain, Geology traces for us the history of the earth during the long periods of time that have preceded its present condition; it makes known to us the beings which have successively inhabited its surface, the revolutions that have conduced to their destruction, and those which have given birth to the mineral layers the earth contains, and the modifications to which this surface itself has been subject by reason of these revolutions; it discloses to us in short, that all these phenomena which have necessarily required so many centuries for their accomplishments, were prior, in point of time, to the creation of man. It conducts us alike to appreciate events, and to reconstruct beings which have preceded, many thousand years, not only the most ancient historical traditions, but also the very existence of our race.

This prolonged history of the formation of the superficial strata of the earth, is constituted, like the history of nations, of periods of repose, or of tranquility sufficiently great, at least, for the waters and the dry land of the surface to become peopled by a variety of inhabitants; and of periods of revolution, during which resistless forces have agitated this surface, elevating mountains, submerging lands previously dry, and causing ancient beds of oceans to issue from the bosom of the deep; in short, pouring over pre-existing rocks the materials for new layers which, enveloping the ruins of living beings, destroyed by these violent convulsions, have thus preserved their remains as precious monuments which now reveal to us, after so many thousand years, the nature of the ancient inhabitants of our globe, and the order in which the several races of beings have succeeded each other.

The study of the periods of these revolutions, and of those of repose, are alike of the most vivid interest: but the first are entirely the province of the geologist; while the second, on the contrary, necessarily require the light of the zoologist or the botanist; for these alone are able,

by an exact comparison of the fossil remains of former beings with the corresponding parts of such as are now existent, to determine the relations which exist between the inhabitants of the globe, at various and distant epochs. It was thus Cuvier, in his admirable researches upon fossil bones, basing his investigations upon the positive data which comparative anatomy furnishes, was enabled to reconstruct the skeletons of the greater part of the animals of which the remains had then been discovered, and also to determine, with the greatest probability, their exterior forms, and their analogy to those animals with which we are now acquainted.

Botany, notwithstanding it has long furnished fewer documents upon the ancient state of the globe, ought, nevertheless, to be equally laid under contribution, by the geologist; and it is even able to cast more light than zoology upon the state of the terrestrial surface, during the most ancient periods of its formation. Indeed, at that epoch when life first began to be manifested upon our globe, the animals were all confined to the interior of the waters, and even these presented but diminished specimens of their kinds; while a powerful vegetation, forming vast forests, covered, at that early period, all such parts of the earth as were not submerged by the sea; and each succeeding period of repose has had its own peculiar vegetation, more or less varied, and in greater or less abundance, according to the circumstances which influenced the development of the beings that composed it, and perhaps, also, in proportion to the duration of these periods; but almost always entirely different from those of either the preceding or succeeding epochs.

Of the different associations of vegetables which have successfully inhabited our globe, there are none which so pointedly merit our attention as those which seem to have been first developed upon its surface; which appear, during a long space of time, to have covered with dense forests all those parts of the earth that rose above the general level of the waters, and of which the remains of successive growths, heaped one upon another, have formed our layers of coal, so deep, extensive and numerous; and in this form the remains of these primeval forests, which have preceded, by so many centuries, the existence of man and which now supply us with fuel, in place of our more modern forest, of which the great increase of the human family is causing a rapidly augmented destruction, have become one of the principal sources of the prosperity of nations.

None can doubt that coal owes its origin to accumulated masses of vegetables, changed and modified, as probably the layers of peat in our marshes would be, if they had been overlaid by thick coverings of mineral substances, compressed under the weight of these, and subsequently exposed to an elevated temperature. If farther confirmation of this origin were necessary, it is found in the almost ligneous structure which coal sometimes presents, and in the numerous remains of plants contained in the rocks which accompany it.*

But the study of the impressions of stems, leaves, and even fruit, which are in general contained, in so great quantities, in these rocks, proves not only the vegetable origin of this substance, but even enables us to determine the nature of the vegetables of which it has been formed, and which, consequently, at the period of such formation occupied the surface of the earth.

Among these vegetable imprints, the most frequent are those produced by the leaves of the Ferns; yet these Ferns of the primitive world are not those which now grow in our climates; for Europe, at this time, does not produce more than from thirty to forty species, while the same regions than nourished more than two hundred, all much more analogous to those now found between the tropics than to those of the temperate climates.

In addition to the leaves of Ferns, the same earths contain trunks, the dimensions of which render them comparable to the most gigantic trees of our forests, while their form is wholly dissimilar; and indeed all the ancient naturalists, struck with this dissimilarity, and yet desiring to find analogous productions still existent, referred them to arborescent vegetables, then imperfectly known, as the Bamboos, Palms, and the great Cactus, sometimes designated *Torch-thistle*. But a more attentive comparison of these products of the equinoctial regions with those trunks, the growth of the ancient world, suffices to dissipate all relations, which are founded only on some resemblances in the general aspect, that have been attempted to be established between them; and a more profound examination, either of these trunks or of the leaves which accompany them, readily shows that the vegetables which formed these primitive forests are not identical with any trees still found flourishing upon the earth.

The arborescent Ferns, which, by the elegance and magnitude of their exterior, now form one of the principal ornaments of the equatorial regions, are the only arborescent vegetables which are recognized, even in small number, among the trees of this antique vegetation.

As to the other fossil stems, remains of these primitive forests of the ancient world, it is among the most humble vegetable of our epoch that we must seek their analogues.

For instance, the Calamites, which attained from four to five metres (a little more than 13 to 16 feet) of height, and from one to two decimetres (not quite four to eight inches) of diameter, have almost a complete resemblance, in all the points of their organization, with the Equiseta (Horsetails) which grow so abundantly in the marshy situations of our climates, and of which the stems, hardly as large as the finger, rarely surpass one metre (about 38½ inches) in height. The Calamites, then, were arborescent Equiseta, a form under which these plants have wholly disappeared from the surface of the earth.

The Lepidodendrons, of which the numerous species appear to have mainly constituted the forests of this ancient epoch, and which have probably contributed more than all other vegetables to the formation of coal, differ very little from our Lycopodiæ. We recognize in their trunks essentially the same structure, the same mode of ramification; and in short we see inserted upon their branches leaves and fruits analogous to those of these vegetables. But while the Lycopodiæ of the present day are small plants, most frequently creeping, and similar to the great mosses, attaining very rarely one metre (about 39½ inches) in height, and covered with very diminutive leaves, the Lepidodendrons, preserving the same form and aspect, elevated themselves to twenty-five metres (a little more than 65 to 82 feet,) having, at their base, near one metre (about 39 1-3 inches) of diameter, with leaves which sometimes attained to half a metre (over 19 1-2 inches) in length. These were, consequently, arborescent Lycopodiæ, comparable, by their stature, to the largest Firs, of which they enjoyed the rank, in this primitive world; forming, as these now do, immense forests, in the shade of which were developed the Ferns, so numerous at that period.

How different this powerful vegetation from that which now clothes, in ever-varying tints, the surface of the earth! Magnitude, strength, and activity of growth constituted its esential characteristics; the smallest plants of our epoch were then represented by gigantic forms; and yet, what simplicity of organization, and what uniformity in the midst of a vegetation so enormous!

At the present day, even in those regions where nature has suffered no change at the hand of man, the eye reposes with delight upon trees which are immediately distinguishable by the diversity of their form, and the tints of their foliage; and which often support flowers or fruits of the most dissimilar colors. This variety of aspect is still more strongly illustrated by a contemplation of the diversified shrubs and plants which fringe the borders of our forests, or adorn our meadows, and of which the flowers exhibit to us almost all the tints of the prism. Finally, there result from this diversity of structure, among these plants, many varieties suited to the nourishment of man or of animals; and indeed such as are even indispensable to their existence.

The variety in the organization and aspect of the vegetables which at present cover our globe is indicated by the number of natural groups into which they are capable of being divided. These groups or natural families amount to more than two hundred and fifty, of which about two hundred belong to the class of the Dicotyledons, (which consequently present the greatest variety of structure,) and thirty to that of the Monocotyledons. Now the first of these classes, that is, the two hundred families which they contain, are completely wanting in our primitive flora, and seldom can we there recognize any indications of the Monocotyledons.

The class which constituted, almost alone, the vegetation of this primitive world is that of the vascular Cryptogamia, which at present comprehends no more than five families; almost all of which had parallels in the ancient world; such are the Ferns, Equiseta and Lycopodiæ.—These families constitute, thus to speak, the first degree of ligneous vegetation: they present, like the arborescent Dicotyledons or Monocotyledons, trunks more or less developed, of a solid texture, although more simple than those of these trees, and garnished with numerous leaves; but they are deprived of those reproducing organs which constitute the flowers, and they present, in place of fruit, organs much less complicated.

These plants, so simple, so little varied in their organization, and which, by their number and dimensions, rise not above a very inferior rank, in our present vegetation, constituted, in the dawn of the creation of organized beings, almost the entire vegetable kingdom, and formed forests so immense that we find not their analogy in modern times. The rigidity of the leaves of these vegetables, the absence of fleshy fruits and farinaceous seeds, would have rendered them very unfit to have served as aliment to animals; but terrestrial animals, at the time of their growth, had not yet existence; the seas alone offered numerous inhabitants; and the vegetable kingdom, at that period, maintained undivided sway over all the undeluged portions of the earth; upon which it seems to have been called to play another part, in the economy of Nature.

We cannot doubt, in truth, that the immense mass of carbon accumulated in the bosom of the earth, in a state of coal, and which is the product of the destruction of those vegetables which grew at that ancient epoch, upon the surface of the globe, has been imbibed, by those vegetables, in the carbonic acid of the atmosphere—the only form under which carbon, not derived from the destruction of pre-existing, organized beings, can be absorbed by plants.

Now, a proportion, even very feeble, of carbonic acid, in the atmosphere, is generally an obstacle to the existence of animals, and particularly of the most perfect classes of them, as mammifers, and birds; while, on the contrary, this proportion is highly favorable to the growth of vegetables: and if we admit that there existed a proportion very much greater of this gas in the primitive atmosphere of our globe than the present atmosphere is found to contain, we may consider this one of the principal causes of the powerful vegetatiom of these ancient epochs.

This collection of vegetables, so simple, so uniform, and which would consequently have been so little fitted to furnish suitable aliment for animals of diversified structure, such as those existing at the present day, in purifying the atmosphere of the carbonic acid which it then contained in excess, would have prepared the conditions necessary to a creation more varied; and if we still wish to indulge that sentiment of pride which has caused man to assume that all in nature has been created exclusively for him, we may suppose this primitive, vegetable creation, which preceded, by so many centuries, the appearance of man upon the earth, was, in the economy of nature, designed to prepare the atmospheric conditions necessary to his existence, and at the same time to accumulate those immense masses of combustibles which his industry was in future time to apply to his necessities.

But, independently of this difference in the nature of the atmosphere, which the formation of these vast depots of fossil carbon renders extremely probable, may not the nature of the vegetables themselves, that have produced them, furnish some data upon the other physical conditions to which the surface of the earth was subjected during this period? The operations of nature now going on in different regions of the globe, may throw some light upon this question.

(*Remainder next week.*)

* The most complete and valuable collections of plants of impressions of these coal plants which is generally accessible, in this Journal, Vol. XXIX, No. 2. This volume contains Dr. Hildreth's valuable paper upon the coal deposites of the valley of the Ohio, which he has accompanied with some thirty pages of excellent drawings of fossil remains and impressions, mostly vegetable, found in the accompanying rocks.—*Translator.*

Domestic Affairs.

In many families, where pieces of bread are left, or where bread has become stale, it is forthwith dropped into the swill pail, and goes to the hogs. This is a very expensive way of keeping hogs, especially as in most cases this swill is given to the hogs of a neighbor. A much better way, particularly with those families in moderate circumstances, is to place the bread and crumbs and pieces into a tin pan, and dry them thoroughly in the oven, and then pound the whole into fine crumbs, and put them into a close jar for future use. Crumbs, thus prepared, make an excellent pudding.

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Doctor Alcott, in his Young Housekeeper, a book that in our opinion will do good in every family where introduced, gives the following directions for making Graham Wafers: Take one quart wheat meal, one half pint of Indian meal, and a little salt; mix them with water, roll them out very thin, and bake them quite hard; add a little sugar, if you choose.

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Sweet Crackers.—One tea cup of coarse wheat meal, one of sour milk or buttermilk, three fourths of a tea cup of sugar, half a tea spoonful of pearlash; made hard, rolled thin, and well baked.

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Pumpkin Pie.—To one quart of stewed and strained pumpkin, add one quart of new milk, and sweeten it to your taste. For the crust, take wheat meal, wet with buttermilk to a sufficient stiffness to roll out. Bake it in deep dishes.

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Another.—Take a brown earthern pan, grease it, and sift Indian meal over it about the thickness of a quarter of an inch; prepare the pumpkin in good milk and sweetening, and add a little ground rice instead of eggs, with a little ginger. Ground rice, squashes, and sweet potatoes, may be made into pies in the same way, and are superior to pumpkins.

Wheat and Rye.

If you desire to have good crops of either of these grains take our word for it, that you must lay the groundwork this fall, by running furrows at intervals of 16 or 18 feet, to carry off the superfluous water which would otherwise lie upon the surface, and either drown the young plants during winter, or be instrumental in causing the ground in spring to spew them up. The beds on which all small grain grow, should be kept *dry*, so as to avoid those accidents by "flood and field," which so beset the path of the husbandman and disappoint his hopes.—*Farmer & Gar.*

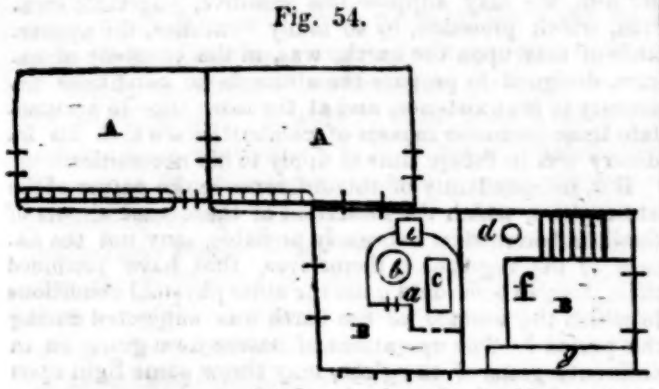
COMMUNICATIONS.

PIGGERY.

Mr. Tucker—During the present season, I have constructed an apparatus for steaming potatoes, apples, peas, pumpkins, meal, in short any thing that requires or is benefitted by cooking, previous to being fed to swine or other animals, for fattening them, and experiments heretofore made have convinced me that very much is gained by feeding cooked food in all practicable cases. The high prices of all kinds of eatables this year, and the partial failure of the buckwheat and potato crops, on which much reliance has before been placed for fattentng pork, renders it plain that great economy must be used in the process of feeding by the farmer, and high prices be obtained for meat, or the making of it must be a losing business for all engaged in it.

As the expense of a steamer is inconsiderable, when made will last several years, may be constructed without much difficulty, and is a decided improvement over the former processes of boiling, &c. I have presented a sketch of my piggery, not because I suppose there is any thing particularly new or superior in the plan, but mainly to call the attention of farmers to this subject.

Fig. 54.



A A, the piggery, 34 feet in length, by 12 in width. It is divided into two parts, one or both of which are occupied as may be required. There are 4 doors, three opening externally and one in the partition. The troughs are placed in the usual manner, the food being put in from the outside; but as will be seen by the cut, pins are put through the upper part of the trough at convenient distances, which effectually prevent any hog, let him be as evil disposed and domineering as he may, from disturbing the others feeding at the same trough. My pigs are fed in one part, and find their bed in the other; unless as is sometimes the case, the feeding part is too confined, when part are accommodated in the other division.

B B, is the building in which the steamer is erected, and is 28 feet in length, by 14 in width. 16 feet of it has a plank floor, while 12 feet, containing the fixtures for boiling and steaming, is open to the earth. *a*, is the stone and brick work constituting the two arches or flues, in one of which is placed a large caldron kettle *b* intended for heating the water in killing hogs; for making soap; or if necessary for boiling roots; while over the other is placed the steamer *c*. Both flues open into the chimney *e*, which reaches some three or four feet above the roof of the building.

The steamer is a box, made of one and one-fourth inch pine stuff, made tight by jointing and matching and halved together at the corners, which are farther secured by pieces of sheet iron covering the corners of the box, and well fastened by nailing. The box is on the inside, 5 feet 4 inches in length by 20 inches in width, and 3 feet 5 inches in depth, containing about 16 bushels of potatoes. The bottom of the steamer is made of heavy sheet iron 28 inches in width; and as sheets of the requisite length could not be found at the shops, the required addition was put on and made tight by rivetting in the manner that boilers are made. The plate is turned up about 3 inches at the sides and ends making a shallow pan of three inches in depth for the reception of the wooden box which is forced into it, to within about $\frac{3}{4}$ths of an inch of the bottom, and the iron is then firmly secured by nailing on the outside of the box. To keep the contents of the steamer from the iron, three pieces of wood two inches in thickness are laid across the bottom of the steamer, and on these a board cut with a center bit full of $\frac{1}{2}$ inch holes, to allow the free passage of steam, is placed. The top of the furnace being made level, bars of iron are laid across it, and on these the steamer is set, the flue being some 8 inches narrower than the bottom of the box, which is thus supported by the sides of the furnace as well as by the iron bars. The top of the steamer is secured by a lid fitting closely so as to prevent the escape of steam, and is then ready for use. For steaming, put in two or three inches of water into the box, or fill it to the board bottom; and then put in your roots. No more water will be required, since the water that will escape from the potatoes in cooking, will more than replace what will be lost in the process, that is, if the box is as tight as it ought to be. Such a steamer under ordinary circumstances can be made, and set, for ten or eleven dollars, and the ease and facility with which articles are steamed, and the saving in time and fuel, above the common kettles, is very great. In fact I can now steam a box of potatoes, in about the time that I used to take to get a potash kettle of roots boiling, and they are decidedly better when done.

d, is a well, furnished with a pump to supply water for the steamer, washing potatoes, &c. &c. *f*, is a space on the floor allotted for potatoes, before cooking; and *g*, is a corn crib, not however much used in these days. The upper part of the building is a farmer's work-shop, to which there is an ascent by a pair of stairs. In describing my steamer I have been more particular than I should have been, had I not known by experience, that minuteness on such topics is seldom deemed a fault.

More experience with such an apparatus, would doubtless suggest some improvement in construction; one of the most obvious of which would be, where a steamer of larger size was desirable, to make the boiler or sheet iron pan broader, by uniting more capacity, and more room for working. The perforated wooden bottom should be removed occasionally, and the dirt and sediment that falls through, removed from the iron, to prevent burning and decay.

I would only add, that in fattening pork, the farmer cannot be too careful in furnishing materials for the pigs to work up into manure, or in securing such manure when made, as experience shows that its actual value is more than double that of common barnyard manure, when applied to the farm.

H. M. G.

Otisco, Oct. 1838.

CORN.

Mr. Tucker—In the last number of the Cultivator, is a paper by the conductor, containing many valuable remarks on this indispensable plant, varieties, culture, &c. with extracts from some other papers on the subject.—Judge Buel says:

"We have before observed that there is a spurious, as well as a genuine Dutton corn, the former of stouter growth, and later in ripening than the latter."

I believe from some experience I have had with this variety of corn, and also from what I have seen of it, that this statement is correct; and that it is the more to be regretted, as the true Dutton corn is doubtless one of the most valuable kinds that can be purchased by the farmer or cultivated by him. A few years since, I, and through my influence, several of the neighboring farmers, procured our seed corn at the seed store in Albany, intending to make sure of the best and undisputed article. We were most miserably disappointed, however, in the result; our supposed Dutton corn being the latest in ripening, of any planted in the vicinity; and the effect has been to give that corn a bad odor among farmers, and deter them from further attempts at growing it. That we were designedly imposed upon, I do not imagine; but the worthy proprietor of the seed store himself, must have had the *stout late* ripening twelve rowed corn palmed off upon him as the true article, and hence the mistake. I have the present year seen some fine fields of the Dutton corn, but there was not that difference between its ripening, and of the best of the common varieties that we had been led to anticipate I did not learn however, that any preparation was used, before planting, as it seems was the case with Judge Buel's, and which may have hastened the ripening of the plant.

Judge Buel ranks his varieties of corn in the order of ripening as follows:—Dutton; Lake Superior; Early White; Vermont yellow, 8 rowed; Red Blaze; and early Canada. I did not plant any of the Dutton corn this year; but both the Lake Superior and 8 rowed yellow, (by some called the Golden Sioux,) and the early white flint corn, the Judge's 3d kind, ripened before any of the Dutton in the vicinity; the Lake Superior corn at least 10 days. In produce it is however far inferior to the Dutton, or even the white flint, 50 bushels to the acre I have reason to think being a large yield. I have reason to believe that soils have much influence in the ripening of grain, or corn. Mine was a good clover ley, turned over in the fall, rolled and harrowed in the spring and well manured before planting. I expected good corn, and was not disappointed. I am confident much is depending on the seed in raising corn. Always plant corn that ripens earliest, and there need be but little fear of early frosts. Selecting seed corn from stalks that have two or more good ears on them is an excellent practice; and will rarely fail of increasing the crop. It is worthy of notice, that in most cases, the earliest ripening ears in the field, are those growing two or more ears to the stalk, a result that may perhaps be attributed to the fact that such stems are usually of vigorous and rapid growth, circumstances favorable to a full development of the grain. I hope the success of this year, will induce the faint-hearted and unbelieving to try a little corn another; and if they will select good ground, manure well, select early corn, plant before the middle of May, and hoe their corn thoroughly, they may depend on a fair crop.

Planter.

ROHAN POTATO.

Mr. Tucker—I think well of the Rohan Potato. Last spring I obtained 45 pounds of John A. Thompson, Esq. of Cattskill. From some misunderstanding in our correspondence on the subject of said potatoes, they were not shipped until rather late; added to this, through carelessness of the boatmen they were carried by me (at Salina) to Buffalo and back.

They were planted on the last day of May, on 4 by 6 rods of sandy loam, (in ruta baga last year,) and a shovel full of barn yard manure in each hill. They were cut with the intention of having two eyes in a piece, of which one was put in a hill, three feet apart. Well hoed once, weeds pulled the second time without moving the earth, and on about the 10th of October, were dug and measured liberally 58 bushels. The tubers are a pale flesh color, shape oblong, rather large size. I call them good for the table. Two of these potatoes were assorted, which exactly balanced one pound and planted in my garden, clay soil, rich and well tilled. The product of which when dug weighed 136 lbs. 3 oz. From the manner in which I seeded this small patch, I am convinced that from one-third to one-half the seed required of the common kind is ample. They thribbled the yield of my Sardinia and Pinkeyes, planted in the like soil, manure and culture.

It is my intention next year to plant them by acre, measure the ground accurately, give them all the seed I deem necessary, manure and hoe them well, and give you the result on the *large scale*.

Yours, very respetfully, Benj. F. Green.

Salina, N. Y., Nov. 1, 1838.

A Word to Mulberry Culturists.

In the selection of ground for your next spring's culture, choose a high situation with a southern exposure, a light loamy, sandy, or gravelly soil, with a porous subsoil. The *exposure* and the *soils* we name, are the best for the mulberry culture. After you have made your selection of ground, there is one thing which we wish you to bear in mind—it is this—that it is absolutely essential to plough your ground this fall. In ploughing recollect the deeper you penetrate the earth the better. Having so ploughed your ground, leave the furrows in the rough until spring, to receive the benefits ensuing from frost and snow. As soon as the frost is out of the ground in the spring, cross plough, lay off your furrows, manure them with well rotted manure or compost, and plant out your mulberries, whether cuttings or trees. Once planted, they must be kept clear, and the ground well stirred. The same culture that a skilful husbandman gives to a *well tilled* corn field, will answer for the Mulberry; but let no man expect fine trees, if he designs to play the part of a *sloven*.—*Farmer and Gardener*.

The Sheep---Improvement of the Breeds.

This subject requires for its due consideration some slight attainments in the anatomy and physiology, but as such attainments, slight though they may be, are as rarely met as required among the bulk of mankind, so the want of them may be the less regretted, seeing it is possible to render even the intricacies of the study plain and simple, by an appeal to the facts of every day occurrence; which, having attracted the notice of the most unthinking will serve as hooks on which I shall try to hang the better part of an interesting inquiry.

Early Improvers of Sheep.—There cannot be a more certain sign of the rapid advances of a people in civilization and prosperity, than increasing attention to the improvement of live-stock. It tells of a population limited in regard to soil, and making every effort to remedy the want, by an economical doubling of the return for the usual outlay; for, while a tribe wanders at large, remaining at a particular place only so long as provender holds out, and, striking the tent, departs for some far-off field, so long will their flocks be suffered to roam neglected, and flourish or decay as chance directs.

From the time of Jacob, the possibility of determining the nature of the offspring, by impressions on the parents has been apparent to all; and the best means of perpetuating a good quality, or removing a bad one, have continued from time to time, to occupy the attention of patriotic individuals. As much appears to have been known about sheep two thousand years ago as at present, so true is it, that nothing new is to be met with; yet, that does not rob our modern improvers of their merits, for though they deserve little as inventors, they are to be admired for that strength of mind, and determined perseverance, which enabled them to rouse their fellows from their lethargy, and compel them to become in turn, benefactors of their country, and themselves. The signs of a good ram are concisely laid down by Varro, by Virgil in his third Georgic, and by Columella; and, though the Spanish nobility were looked upon with wonder, (till eclipsed by our own extravagance, in fixing two hundred ducats, or fifty pounds for a ram; yet Strabo assures us, that in his day (under Tiberius) they gave more than three times that sum for one of the breed of the Coraxi, a Pontic nation, believed to have the finest fleece in the world.

The greatest recorded improvers of the sheep in ancient times were Lucius Columella, and his uncle Marcus Columella, Spaniards of distinction, who removed to Rome in the reign of Tiberius, and made agriculture the study and business of their lives. The former commenced his celebrated treatise on husbandry during the reigns of Tiberius and Caligula, and appears to have finished it A. D. 55. It is a work which may be read with advantage even at present, as it abounds with much that is valuable, and is accessible to all through its English translation.*

Modern Breeders.—It is only within a very recent period, that the mode of improving live-stock by skillful breeding, has been properly attended to. The perfection of breeding formerly, was to have cows in calf once a year, and rear calves on as little milk as possible; and, even yet, there are only a scattered few who devote to it the attention it requires. The first, in modern times, who arrived at anything like eminence in the department, was Joseph Allom, of Clifton, who raised himself by dint of industry, from a ploughboy, and for a long time contrived to keep his methods secret, being supposed by many to have bought his ewes in Lincolnshire, at the very time he was constantly bringing them from the Melton quarter of Leicestershire. Though possessing talent, he does not appear to have had education enough to avail himself of it, and accordingly never gained the extensive popularity which fell to the lot of his successors.

As the introducers of new and important plans of management in agriculture, are always rewarded by large profits, and the gratitude of their countrymen, so none were ever more generously dealt with in either respect, than Mr. Robert Bakewell, of Dishley, and Mr. Ellman, of Glynde. The former, who may be said to have created a *variety*, considered that a tendency to acquire fat was the first quality to be looked to in an animal destined for the food of man; and on this, with him a fundamental principle, was based the whole of his proceedings. Different opinions will of course be held on the merits of the theory on which he acted; but all must acknowledge, that we are indebted to his skill and experience, for the exertions which have been subsequently made to improve the qualities of live-stock, in every district of the kingdom. It was by his example in fact, that the farmers all over the country were stimulated to exertion, and be the system bad or good, it ought to have our veneration, seeing that it was the commencement of a new and most important agricultural era.

John Ellman derives his well-earned fame, from the zealous manner in which he improved the South Down sheep, and spread them through the empire. Till he directed his attention to the subject, every thing connected with the management of the flock was left to chance, or at least to the guidance of farm servants, with whom, of course, it could not be a matter of interest to select or *sort* suitable animals for the continuance of the race. He speedily however, corrected this mismanagement, and aided by the introduction of turnep-feeding, in no long time, and without any admixture of foreign blood, materially improved the breed.

About seventy years ago, improvements also commenced in Scotland. Till then, in many parishes, no farmer could keep sheep through the winter, and no place was reckoned so fatal to these animals as the undrained, and unsheltered parish of Eskdale-Muir, in Dumfries-shire. At last one William Bryden rented the farm of Aberlosk, and soon, by the *original* plan of draining, and building stone enclosures, made it, to use the words of his able biographer, Mr. Scott, of Selkirkshire, "like the land of Goshen, good for cattle, which it is to this day."

Varieties among Animals.—All organised matter is subject to variety. It may be doubted whether, since the creation of the world, there have ever occured, either at the same, or at separate periods, two individuals in every respect perfectly alike. A plant, or an animal, may resemble the rest of its species in chemical constitution, and in the number and situation of its organs, but is sure to differ from all in size, general configuration, and dispositions of its parts. These shades of difference, endless though they are, may be referred to two leading causes—climate and descent; the former embracing deviations induced by temperature and resources of subsistence; the latter including changes occasioned by management, modes of breeding, and influence of sex.

Varieties induced by temperature.—The influence of temperature extends chiefly to the *color* and *development* of animals. In cold regions the skin of the human race is fair, and the person squat and stunted, but as we approach the equator, the hue becomes deeper and deeper till it is jetty black, while at the same time, the stature attains nearer and nearer to the tallest proportions to which mankind seem naturally entitled. The animals of the arctic regions are, for the greater part of the year, covered with a clothing of the purest white, which is however, in many of them, abandoned for one of deeper tints as the solar heat begins to gain the ascendant. But how very different do we find the colors of intertropical animals.—There vivid tints, and an almost metallic lustre, pervade animated beings, from the coral in its submarine abode, to the gallinaceous birds, the coxcombs of the forest. In this, as in every other department of nature, the most beautiful harmony, or, in other words, a union of what is pleasing to the eye, and suited for the comfort of the creature, every where prevails. The color of an animal envelop is never at variance with the tints of surrounding objects. A painter for example, would not place a flower or animal of brilliant hue amidst the monotonous aspect of an arctic landscape; neither would he picture the faintly tinted beings of a polar latitude, as surrounded by the warm and flashy coloring characteristic of an oriental climate. As temperature, then, determines in a marked degree the color and dimensions of every animal, such variations render the divisions of living beings into races and varieties, a matter of necessity. Thus all human beings belong only to one species, which may, however, be divided into five races, and these again into an infinity of varieties. The difference between a race and a variety are, that the latter is a subdivision of the former, and that in the former the modifications are more profound, the changes not being confined to the surface, but extending to the frame-work of the body; whereas, to constitute a variety, nothing more is necessary than the superficial influence of heat and light on the skin, and its appendages the hair. The Negro and the Abyssian are precisely similar in color, yet they are by no means of the same race, as their different features will distinctly prove; the Abyssian approaching as much in cast of countenance to the European, as the negro does to the higer orders of the ape. The same may be noticed among sheep, but this is sufficient for the present.

The changes induced by climate, result from the working of a power inherent in most animals and vegetables, by which they are suited within certain limits, for bearing up against removal from their ordinary localities, and assuming a different cast, as the place of their exile may differ in degree from that which they have left. The gradual adaptation to circumstances by an accommodating power is termed, in philosophical language, acclimation.

Adaptation of the Sheep to Climate.—No animal varies more than sheep, and none so speedily adapts itself to climate; it would almost appear that nature, convinced of its great utility, had bestowed upon it a constitution so pliant, as to enable it to accommodate itself to any point in a wide scale of temperature; for though its natural situation as a wool-bearing animal, like that of man, appears to be the wine countries, yet with him, it has spread to every quarter of the globe, becoming impressed at every change with some peculiarity, alterable only by a change of situation, and varying, we might almost affirm, with the weather; for where the temperature is equable, there does the animal preserve unchanged an atmospheric stamp and defies our efforts to alter the breed; while under a fluctuating sky we can model it at will, though in this case, continued exertions are requisite to secure them for any length of time in an undeviating course.

Changes produced by Climate.—The wonderful power of temperature in effecting changes upon animals, is well illustrated by the Portuguese, who, after a residence of three hundred years in India, are said to be at present almost as black as Caffres. Bishop Heber, speaking of India, says, "It is remarkable to observe how surely all these classes of men (whites—Persians, Greeks, Tartars, Turks and Arabians,) in a few generations, even without any inter-marriage with the Hindoos, assume the deep olive tint, little less dark than a negro which seems natural to the climate. Buchannan also in his travels through the same country, alludes to a tribe of black Jews who have in all probability, been settled in the district ever since the period of the captivity under Nebuchadnezzar, 3000 years ago, and who retain all the national peculiarities of their race, with the exception of their color, which is now as dark as that of the surrounding tribes. These examples however, it may be affirmed, are not to the point, as embracing theories in regard to peculiar changes in an animal different from the sheep, but such objections are perfectly groundless, as what will affect color in mankind, will lead to changes even of a more wonderful nature in the sheep, seeing that it is abandoned more entirely to such an influence.

Temperature preferred by Sheep.—Sheep, though capable of thriving in a great variety of climates seem to prefer such as are temperate, and in these only do they arrive at perfection. They are common on the Cordilleras at an elevation of from 3,300 to 8,200 feet, within which limits they propagate readily without any care; but the reverse is the case in hotter regions, it being difficult to rear lambs in the plains of Meta, and no sheep are to be met with from the river to the foot of the Cordilleras, though their skins, from being in demand for making parchment, sell as high as those of the ox. Sheep were at one time, according to Thunberg, the scarcest article in Batavia, as their woolly coats rendered the heat of the climate quite insupportable; but this inconvenience was at last remedied by sending them, on their arrival from the Cape, further up the country, to the Blue Mountains, where the air is several degrees colder. The question then naturally occurs, if an elevation of temperature is, as in this instance, fatal to these animals, how do they happen to have spread over a vast tract of country in spite of such extremes? Simply for the reason, that when an animal is left to the exercise of its own free will, and the dominion of its instincts, it will not subject itself to the danger of an extreme in any thing. It will not traverse several hundred miles in a single season, and thus expose itself to sudden changes. The natural disposition of all animals is gradual, so that their constitutions are enabled from the slowness of the transition, to accommodate themselves by an alteration in covering and habit, to surrounding circumstances, which would, were the variations abrupt, speedily destroy it. The reason why a race of animals occasionally thrives so well in a country to which it may be removed, appears to lie in its being suited, I may say, accidentally, by peculiar conformation, to the temperature to which it is transplanted. There are some happy climates where, introduce what animals you will, no matter how stunted they are, or how different the degree of warmth may be, the offspring will thrive, proving large and vigorous, and every way worthy of being placed at the head of its specie. There are, however, cases where the transition is from an extreme of heat and cold to a temperate atmosphere. Witness what Mr. Dawson, the manager of the Australian Agricultural Company, says in his private journal (quoted in *Cunningham's New South Wales*). "Both the climate and the soil appear by nature intended to produce fine wool, and fine animals too, *even from the worst beginnings.* The latter seems a paradox. The extensive range afforded to every animal keeps it in good condition, and perhaps, the natural grasses may have more of good in them than their appearance indicates. However this may be, the climate clearly has a wonderful effect on the size of all animals, even upon man, who is universally tall here, though born of diminutive parents. From this I am led to believe, that the climate governs chiefly, and t us every breeding animal introduced here will attain a size not known in Europe."—*Blacklock's Treatise on Sheep.*

From the Franklin Farmer.

Bulleting as a Substitute for Spaying.

Midway, Woodford Co., Ky., Aug. 15, 1838.

Dear Sir—The object of writing communications for the public should be to diffuse useful information, and they should, therefore, only convey *facts.* Errors which are likely to have an evil tendency, should be corrected. False theories and half-tried experiments, though frequently promulged from the purest motives, often do great injury; and yet to hold the secret possession of facts, hoarded up for the purpose of selfish emolument, without regard for the good of others, is mean and selfish in the extreme.—

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*I allude to this, as the author of the work on Sheep, published by the Society for the Diffusion of Useful Knowledge, at page 123 of that book, laments the want of an English translation of Columella. An excellent quarto translation of his twelve books on Husbandry, and one on Trees, was published at London, in 1745.

Taking the position, that it is the duty of every one, to do as little harm and as much good as possible, I hasten to correct, and thereby counteract the evil effect that might be produced in consequence of a recommendation which I made, of bulleting sows instead of spaying them, under the signature of "Woodford Farmer." Although Mr. Davis was successful, in his first operations, others have been unsuccessful, and I have undoubted authority to state that bulleting *will not answer* as a substitute for spaying, which, in justice to myself, as the author of that recommendation, and for the public good, I hereby make known the facts as communicated to me. BIRD SMITH.

Remark.—We have known bulleting to succeed well. It would be an inquiry well worthy of attention, to ascertain the circumstances under which bulletting, as a substitute for spaying, both succeeds and fails.—*Ed. Franklin Farmer.*

From the New England Farmer.

We have great pleasure in laying before our readers the subjoined address. We listened to it with much interest at the time of its public delivery. Some of its doctrines may be deemed heretical. Let them be fully considered. We neither deny nor endorse them; but we express the hope that they will lead to a full discussion among some of our intelligent correspondents. Mr. Buckminster is entitled to great regard for his agricultural spirit and enterprise; for his successful and profitable management of his own farm, of which we published an account in January last in his letter to the Trustees of the Massachusetts agricultural society; and for the invention of several valuable agricultural implements. His drill planting machine of which hereafter we shall give a full account with a plate, is an admirable machine; and we have had the pleasure of witnessing the perfection of its operation. Nothing could be executed more skilfully or exactly than the planting of a field of corn, which we inspected. It contained half an acre; and the work was executed in thirty minutes by this machine, held by a man and drawn by a horse. His machine for sowing grass seeds and grain promises to do excellent work. He has effected likewise, what he conceives, a valuable improvement in the horse rake. We thank him in the name of the agricultural community for all his improvements and wish him all possible success.

The matter of renovating worn out lands, particularly described in this address, deserves the careful attention of the farmers. Its efficiency and multiplied advantages are not matter of question. Experience has emphatically determined them.

—

AN ADDRESS,

Delivered before the Middlesex Society of Husbandmen and Manufacturers, at the Annual Cattle Show in Concord, Mass., Oct. 3, 1838. By WM. BUCKMINSTER, ESQ., *of Framingham.*

FRIENDS AND BROTHER FARMERS,—We meet this day to compare the results of the labors of the year.

We are members of a profession—ancient and honorable indeed—but are still imperfect masters of the science of agriculture.

The earth is given us "to dress it and to keep it."—Shall we not annually give an account of our stewardship?

We find its surface—a portion in which we are principally concerned—in total disorder; and in general not furnishing gratuitously the simplest wants of nature.

Even fishing and fowling, the first efforts of the rude tribes of earth to appease the calls of the stomach, require efforts not precisely congenial with the feelings of the slothful. Necessity therefore, calls loudly on us to be diligent, and what our hands finds to do, to do with all our might. This disorder and barrenness of uncultivated earth, and the pressing wants and necessities of our race suggest to all, who do not choose to beg, this stern alternative, "be not ashamed to dig."

If we examine the works of creation and study diligently their structure, we findthat every thing beyond our reach moves in perfect harmony and order. Those heavenly lights that assist and cheer us on our way, which move with such velocity through boundless space, which note how rapidly "time rolls his careless course," need not the hand of man to point *their* way. Harmony—perfect harmony, marks their movements. The Creator of these distant lights, from us asks no correction—no improvement.

Not so that portion of creation with which we come in contact. We find it in disorder—unproductive—barren. It was thus presented to us for the wisest purposes. It was left to us in this state that we might have employment. It was given us, "to dress and to keep," to be improved for our use. The necessity of exertion to supply our wants shows the wisdom of him who imposed it; and we discover that those portions of the earth that require least from the hand of cultivation are by no means most favorable to our moral or intellectual culture.

Our inquiry now is,

How shall we "dress it?"

How shall we "keep it?"

Shall we not first endeavor to imitate Him, who in his perfect works has brought order out of confusion.

Order is his first law. Farmers! let everything be done in order. If you regard your own peace—the happiness of those around you—the comfort of the animals entrusted to your care, regard order. Let your fields be laid out in order. Let your fences be kept in order, if you would have orderly cattle, and let all be fed in order.

Your meanest vegetables must be planted in order, or you fail of a full crop.

In drill-husbandry you gain much by perfect order in the drills. Your teams can then perform what must otherwise be done with the hand-hoe or the fingers.

In regard to the kinds of crops we should cultivate, the general rule, should be,—Select the most profitable—always taking into the account the exhaustion of the soil.

Culmiferous plants, or those that have but little leaf, are found in general to impoverish the soil more than those that have large leaves in proportion to their stalk. And plants that ripen their seed exhaust more than those we cut while green. All kinds of grain, therefore, impoverish the soil, which must be often replenished with manure.

The various grasses may be continued a long time—cutting them in a green state—provided we can keep the soil from binding, or their roots from choaking the circulation of sap.

Of all the root crops potatoes are believed to be the most exhausting. They impoverish light soils even more than corn does, and we obtain better crops of grass after corn than after potatoes with the same manuring for both.—We pull potatoes as we do flax and hemp, and we leave but few roots to be decomposed for the benefit of the following crop. After obtaining a crop of *corn* we leave the soil filled with sweet roots that are converted into manure the following season.

On some accounts it would be desirable that our own soil should furnish us with all the productions we use.—But Providence has otherwise ordained, and we must depend on other climes for many of the necessaries of life. We cannot be entirely independent. How mortifying to our pride! Dependent on other climes for the supply of our wants! And can we see no wisdom in this ordination?

What else gave birth to commerce—the golden band that unites the distant nations, brings intelligence and civilization in its train—overcomes the prejudices of man, and almost bids defiance to famine.

Shall we lament the evils of dependence if these are among its fruits?

Ought we to desire the entire independence of any nation, even our own? Nations as well as individuals are better for being dependent.

If more fertile regions can supply our cities with grain at a cheaper rate than we can, let us not lament. We shall find full employment in furnishing what cannot so well be transported from a distance. Fresh meats, butter, hay, and the small market vegetables must be supplied by the farmers of N. England.

Beef cattle cannot cross the North river to compete with ours, and if we fail to supply all the wants of our own markets we can furnish those that are most to our advantage. It is believed that the raising of grain of any kind and fitting it for market is the most laborious and the least profitable employment we engage in; and we should bear in mind that grain is the greatest exhauster of the soil.

The times are changed and we must change with them. We cannot now, as formerly raise much grain for the market.

The virgin soils of the west and the increasing facilities of intercourse with that region render it probable that much of our grain will be imported thence; and when no obstacles are thrown in the way of commerce, this is no evil. We purchase, not because we cannot produce the same commodity, but because we can produce others to more profit.

Let them supply our cities with grain. We will manufacture their cloth and their shoes. Our artists may eat bread from the west—we will supply them with what cannot be brought from a distance.

Most of our soils of easy tillage are exhausted by cropping with grain. They have become destitute of vegetable substance and must again be replenished with it.

At present the various proceeds from the grass field are the most profitable productions, and they will probably continue so.

Pork cannot here be made at a profit without the aid of the dairy. The fattening of beef is usually a losing game as soon as we begin to feed on grain.

Hay usually remunerates the producer. It is easily prepared for market, and it does not exhaust the soil. A field that has lain twenty years in grass is not thereby impoverished. It will produce as much on being ploughed again as if it had lain but six.

The soil has become choked and dried by a superabundance of roots—roots that are still half alive and therefore not subject to decomposition.

When soils have become thus choked, or as we say bound out, they must be moved or loosened again. In low ground, this is partially effected by a top dressing; in high grounds the process of planting and sowing is resorted to that an opportunity may be had of manuring again.

(*Remainder next week.*)

From the Boston Horticultural Register.

FRENCH HORTICULTURE.

The modes of cultivation pursued in other countries are always an interesting study to the horticulturist, whether they present new and striking features, or merely follow in the path we have traced out for ourselves. If they agree with our plans of proceeding, they serve to confirm the correctness of our judgment, and encourage us to proceed steadily in the course we have hitherto pursued; if, on the contrary, they present points of difference, it is not unlikely that they may suggest such improvements as will eventually prove of great benefit and profit. It is from a conviction of the utility of comparing our own notions on horticulture with those of our continental brethren, that we are always careful to lay before our readers such intelligence as we receive from France and Germany. We are enabled this month to give some account of a very interesting excursion lately taken by M. Poiteau, the celebrated French horticulturist in the neighborhood of Fontainebleau. His principal object, in making his little tour, was to examine the plantations of evergreens and American oaks laid down by M. Vilmorin, on his property near Montargis. This property, consisting of about 1200 acres, is called Les Barres. It extends, without interruption, for something more than a league from east to west, and is cut in the centre by a small vally, which serves as the bed of a stream of some breadth, admirably fitted for breeding fish, and sufficient to turn any mills that might be erected on its banks. Curiously enough, the soil to the west of the little valley is silicious, whilst all the ground to the east is calcareous. The high road to Lyons passes close to the property, and the demesne is crossed in various directions with country roads, establishing an easy communication with the neighboring habitations. The whole estate is divided into four farms, of which two, containing about 600 acres, are in the hands of M. Vilmorin himself, and on them he makes his experiments in planting. It is not our intention to follow M. Poiteau, step by step, in his interesting examination of this property. We shall merely choose out such passages as may be of value to the readers of our Journal generally, giving them in M. Poiteau's own manner.

A GIGANTIC APPLE TREE.—"In examining the country, and from the appearance of the thickets scattered about here and there, I am inclined to think that, not many years ago, the whole district was covered with forests. One sort of tree is seen here more frequently than the others, and that is the sorb-apple, many of which appear hundreds of years old. One of these trees, in a hedge not far from M. Vilmorin's habitation, appeared to Bosc not less than from 800 to 1000 years of age. I am not aware on what calculations Bosc has formed his opinion; but I think that 600 years must have been the extent of its existence. It is probably the oldest sorb-apple tree in France; its trunk, which is about four feet in diameter, is exceedingly short, being divided, at about six feet from the ground, into five enormous branches. The value of this tree cannot be well ascertained, but smaller ones, whose trunks were twelve or fifteen feet without branches, have been estimated at 100*l.* or 120*l.* The fruit of these trees is carefully gathered to make a sort of cider, considered in the country far superior to that made from common apples or pears. The wild pear tree, with small tart fruit, is common enough in this district; but a variety of it called the "sage pear tree," probably because its leaves are white like the sage plant, is seen in as great quantities as in Burgundy; and makes delicious perry. It bears a load of fruit, and is well worth being introduced into other districts."

STATE OF AGRICULTURE.—"At the aspect of these uncultivated plains, which are manifestly so ill adapted for tillage, where a badly constructed plough just scratches the earth once every two or three years, it is natural to inquire, why trees are not planted along the roads, to break the tiresome monotory of barrenness? Mr. Vilmorin asked himself the question on taking possession of his property; and since then he has been constantly engaged in efforts, both by his example and his advice, to induce the inhabitants to improve the appearance of the country. He had, at first, to combat both a system of blind routine and a host of deeply-rooted prejudices.

"It is almost incredible that, in the midst of France, within fifty miles of Paris, in the 19th century, he should have to fall in with farmers, who, with three or four hundred acres in their possession, should refuse to grow a single load of fodder, and should purchase all the hay necessary for the keep of their horses!—farmers who sowed their seed on fallows, still covered with thistles—who manured their wheat land at the rate of two or three little cart-loads an acre, or often put down no manure at all! Thanks to M. Vilmorin, his farmers are no longer in a state of such gross ignorance; but the thistles of his neigh-

bors still introduce themselves, and defile his ground. Yet ten years have elapsed since he began his improvements."

American Oaks.—"These trees have been included, to some extent, in the experiments of M. Vilmorin, and he can now declare that no species of this tree will succeed, even in a midding degree, in bad calcareous land; whilst some succeed perfectly, and others tolerably, in poor silicious land. He has planted a great number in land of this description, and there is every reason to believe that the results will be most gratifying, particularly as similar experiments, on a vast scale, made on a poor sandy soil in the Bois de Boulogne, near Paris, by M. Dandre, have been attended with unhoped-for success. It is probable that, if so few American oaks are seen in France, after so many attempts made to extend them during the last century, the reason will be found in the fact, that they were planted in earth which was not suitable to them."

Grapes.—"M. Brassin has under his care two objects of a very different nature—the grand park in the style of Le Notre—and the Royal Vinery; I intend speaking of the latter object alone. This vinery, the origin of which is taken back as far as Francis the First's time, is, without dispute, the finest and largest in the world. It is a wall about a quarter of a league in length, running from east to west, about ten feet high for three-fourths of its length and eighteen to twenty in the rest. It is covered on the south side with a kind of grape called *chas elas*, the fruit of which acquires, at Fontainebleau and at Thomery, quality and beauty which do not distinguish it elsewhere. It is useless to say that, since its origin, the wall has been many times repaired and rebuilt, and that the vine has been frequently replanted; but that which is little known, and little practised in any other place, except Fontainebleau and Thomery, is the clearing of the vine, or the replacing the vines of which the grapes appear degenerated or inferior by others whose fruit is of the finest quality. It is by this practice that the Royal Vinery preserves its superiority over all others in the kingdom. There exists, at present, but one plant of all those which M. Brassin found there seventeen years ago; and many of those which he has since planted have been replaced by others considered of better quality. The present appearance of the Royal Vinery is really beautiful.

"M. Brassin communicated to me the two following facts, which I think worth publishing for the sake of horticulture: he had always been in the habit of following the custom, adopted every where, of enriching the earth of his grapery with dung, and he at last is able to prove that this application impairs the quality of the grape. At present, he applies no more such manure; he gets together the cleansing of ditches, grass-turf, sweepings of roads and filth, and mixes them well together. He suffers the mass, thus prepared, to ripen for two years, and maks use of it in place of dung. This confirms what has already been ascertained, and what the best authors have recommended; but the second communication is altogether novel, and I am going to arrive at it by a transition as natural as possible. When the maturity of the grapes is at hand, or when in backward seasons fears are entertained that the ripening will not be easy, it is usual for the greatest number of persons, even gardeners, to cut and pull off all the leaves which are before the fruit, in order, as they allege, that the sun may shine full on it, and ripen it speedily; and although experience proves, that the more the leaves are removed the less the fruit ripens, custom always causes the leaves to be taken off in abundance, at the expense of the quality of the grape, which then wastes away and gets wrinkled in place of becoming ripe. M. Brassin acts altogether differently with his. He knows that the leaves cannot be removed in a great number with impunity, from around the grapes, and he is therefore exceedingly cautious, and refrains from removing any of the leaves in front of the fruit. Those which he takes away are those behind, lying between the grapes and the wall, in order that the heat of the sun, being reflected by the wall, may strike the grapes from behind, and produce the effect desired. I have had experience of the efficiency of this proceeding; and I do not hesitate to recommend the practice of it, whilst I condemn the old custom of taking away the leaves in front. One ought to possess some notions of vegetable physiology, in order to take away leaves properly, otherwise the fruit is sure to suffer."

Cedars of Lebanon.—"To turn to the best advantage land which was manifestly unfit for either tillage or grass, M. Vilmorin planted seeds of various trees, in order to judge which would succeed best, and he has already experienced the most satisfactory results in his experiments of evergreens in a silicious soil. The sylvestre pine, and all its varieties, the maritime pine and the laricio, grow there with great luxuriance. The growth of this last-named tree is a remarkable circumstance, and ought to be carefully noted. The *pinus strobus*, and the other American pines, are also there in great numbers. The cedar of Lebanon, the colossus of the vegetable kingdom, after a long and delicate infancy, has at last pushed forth most vigorously, and promises ages of prosperity. M. Vilmorin's estate will be, perhaps after some years, the only spot in the world where this tree will be found in any considerable numbers; for Mount Lebanon itself does not possess more than twenty, and few persons plant more than two or three in their pleasure-grounds."

From the Farmers' Cabinet.

MILCH COWS

The attention of farmers is invited to the consideration of the character and condition of our milch cows.

How much ought a cow to yield to be worth her keeping? What is the average time that our cows are in milk? Is there much if any waste of fodder among us by keeping cattle that yield little or no return of profit? Questions like these, and there are many such, ought to be put and answered: it may turn out that our dairy stock is extremely low in character, and its management wasteful.

If something like an average quality of milch cows could be settled to afford a standard, and it should be understood that no good farmer would keep an animal for milk that fell below it, all the cows in the country would soon come up to the standard and go beyond it.

A milch cow of *medium* quality, in this state, will give, it is supposed, 12 quarts of milk per day for two months after calving, and 7 quarts per day on grass for the next 4 months, and 4 quarts per day for the following 2 months, and perhaps two quarts 1 month longer. Altogether 1500 quarts, in a year.

It takes 9 quarts of milk to make a pound of butter, and 4 quarts to yield a pound of cheese. The skim milk and dairy whey may be valued at $3 a cow per annum.

Now a cow that gives 1500 quarts of milk in a year, produces 166 pounds of butter, worth sixteen cents per pound, ... $26 55
Skim milk say 3 44

$29 99

Or 1500 quarts of milk will give at four quarts to the pound of cheese, 374 pounds, which at 8 cents per will be $30 20
Whey, say 3 00

$33 20

Nothing is said of the worth of the calf, as all the milk the cow gives is credited. A milch cow's keeping one year cannot be short of $25 in the interior.

Suppose a farmer to resolve that he would keep no cow that did not hold out a good milker, 9 months in the year—and that did not give 16 quarts of milk per day for two months after calving, and 12 quarts per day the next four months, and six quarts per day the next three months, and two quarts per day the month following. Such a cow would yield per annum 3000 quarts of milk.

Here it may be remarked, that with the addition of five dollars per annum to the cost of food estimated for a cow the net profit would probably be four-fold.

Is it not practicable to have throughout the country, as common dairy stock, animals as good as the last described?

This question is submitted to farmers for consideration. The probability is, that in taking some pains to get stock as good, they would get even better.

If the various modes of obtaining this object were resorted to at once with zeal throughout the country, there would be a prodigious improvement in a very short time. No young animal of promising appearance for milk would go to the butcher. More care would be taken of young stock. More young stock would be retained to insure a better selection for milch cows. Farmers would think more of the advantages of employing bulls of the improved breed. Heifers would be milked with great care and very thoroughly, to get them into the habit of holding out longer as milkers. If they once dry early, no care and keeping will afterwards correct this fault. Heifers with the first calf should be fed well, and with some additional care, the last three months they are in milk, to make them hold out.

The profit of a milch cow is not generally understood. Milk is not only the most nutritious, but the cheapest article of food. The food necessary for a cow in full milk, does not exceed in price, one-third of what is necessary in feeding for the butcher.

These few remarks are hastily made to draw out farmers on this subject. There is a great deal to be said upon it, and a great many facts to the purpose, which should come to light.

To Salt Butter—Beat very well up together in a marble mortar, half a pound of common salt, 4 oz. of powdered loaf sugar. To every pound of newly made butter, (the milk being well drawed off by beating) put an ounce of the mixed powder; incorporate it well, and put the butter in pots for keeping. In about a month—not before—it will be fit for use; and it will continue for ten years as good as butter newly salted.

The editor of the Worcester Spy has received a present of a cucumber, six feet and six inches in length, raised in the garden of Joshua Clapp, in Leicester.—*Yankee Farmer.*

Crops of Missouri

Mr. Roberts—From information obtained subsequent to my communication of the 6th inst., I find that I was mistaken as to the extent of the country through which the corn crop was universally good, for although it is good, excellent throughout a large proportion of the Mississippi valley, yet in particular districts it is light in consequence of the drouth, which has been so disastrous east of the Alleghany ridge. In some parts of Kentucky there will be only about half an average crop made, while in other parts the present crop is equal to any previous one; and in Ohio the same remarks will probably apply, though my information with regard to Ohio is rather limited. From Tennessee I hear nothing definite as to the corn crop, but below that state the crop of the present season is represented as the very best the country has produced. As it regards the whole country west of the states named above, the statements made in the letter referred to above are literally true. As there is no tobacco cultivated in my immediate neighborhood, I forgot to say any thing on the subject of the tobacco crop here, although one of considerable importance to the state, both as it regards the quantity and the quality of the article produced here. The same causes that have reduced the amount of the present crop at the east, as compared with former crops, have had their influence here, though not to the same extent, (viz. the failure of the seeds to grow,) but there is probably more than half the usual quantity made the present season, and it is represented on all hands as the very best crop in quality that has been made in the country. In the 19th No. of the Farmer and Gardener, some statements are contained on the diminished quantity of beef that will be taken to market this season from the middle Atlantic states, in consequence of the failure of the corn crop and the pasturage; now, if we could but obtain the cattle that you have and cannot fatten for want of food, it would suit us exactly, for we have not, nor can we obtain more than half the cattle that we could conveniently feed the present season. The crops here have been inferior for several successive seasons past, and consequently stock has increased in numbers commensurate with the other resources of the country, and now that we have again made a full crop, we have not stock to consume it.

The weather is extremely dry here now, and has been for a great length of time so dry that we cannot put in our fall crops. Some farmers sowed their fall crop more than a month since, and some of the crops sown thus early have perished out in toto; not a living sprig is to be seen in large fields, while other crops have lived thus far, though apparently suffering much, and others are being devoured by insects of various kinds.

Those farmers that have sown within the last four weeks have experienced a total failure, as the seed vegetated and perished before it took root. The weather is still unusually warm for the season; we have had the finest season to save fodder that has ever been seen. The earth, the air, and all other substances have been so absorbent, that we could cut and put up any quantity of corn we pleased together at once, and in less than two days it was perfectly cured, and that work is now about done.

Yours, respectfully,
JOHN SMITH.

Dardenne P. O. Mo. Sept. 27th, 1838.

Cattle Show and Fair.

On Wednesday and Thursday, the third and fourth days of October, instant, the Berkshire Agricultural Society held in twenty-eighth anniversary at Pittsfield. The rain which continued until 11 o'clock in the morning of the first day, was the only unpleasant circumstance attending the Fair; and this did not prevent the usual collection of animals, even from some of the most distant towns in the county. The field appropriated to the exhibition of cattle, sheep and swine, was the principal place of concourse and it was here that the good effects of this society were made again as in former years, strikingly apparent. The exhibition of working cattle, particularly four year old oxen and three year old steers, has never been equalled before, either in number or quality. Indeed of the neat cattle generally, we have never seen so great a variety together before. Besides native breeds, there were the Durham, the Devonshire and the Ayrshire, with a variety of crosses. The committees were engaged most industriously during the afternoon in viewing and comparing the animals; and in the evening in preparing their reports. The reports of the committees will give the details in this department.

The Hall of domestic manufactures was also a place of great resort; and presented an interesting variety of the results of domestic and manufacturing industry. The afternoon of the day was delightfully pleasant. The whole scene was one of exceeding interest, to all who have the interest and honor of old Berkshire at heart. The vast concourse of our fellow citizens, all seemingly gratified with this opportunity of exchanging their congratulations, comparing the results of their agricultural experience, exhibiting their stock, viewing the stock of others, buying, selling, and exchanging, could not but be regarded with

pleasure and patriotic feelings. Although this is the oldest agricultural society in the United States—although this is its twenty-eighth anniversary, yet the interest of our community in its annual Fairs, so far from flagging, is constantly and steadily increasing. It is our best; almost our only holiday; and the citizens of Berkshire will long continue to cherish it.—*Lenox Eagle.*

Remedy for Short Crops.

The excessive drouth has so diminished the pasturage in some neighborhoods as to render it necessary to resort to feeding stock with fodder, and if it should continue, many more will be under the necessity of resorting to it. If so, or if the season for feeding should be much prolonged, which looks probable, economy and good management will become necessary, otherwise much suffering will result. In order as much as possible to avert this state of things, let every farmer cut the *hay, straw* and *corn fodder* given to his stock, and wet or moisten it before it is fed. Much will be saved by this simple process, as will soon be discovered by making trial of it. An excellent farmer has been doing it for some weeks past with manifest advantage. Let all the grain fed to your stock be first *boiled* or *steamed*. It is much better for having the heat applied gradually, and for a long time; eight or ten hours is better than a shorter time; it will double the bulk of the grain, and from experiment, it is believed that one bushel of the cooked grain, goes as far as two bushels of the raw; if so, one half is saved by the process, abating labor and expense. If your boys should demur at the labor, or show by their looks or their mutterings, that they are too lazy to save a penny, hire a hand at once to attend to it properly, and turn them out to hunt pasture for themselves, and let them try the experiment of *getting a living* by growling and complaining, and *despising* industrious, economical habits. They may do for steam doctors, but they are not the stuff of which *thriving farmers* can be made.—*Farmer's Cabinet.*

Nicholas Biddle has made a purchase of 50,000 splendid trees of the Morus Multicaulis, or Chinese Mulberry, and intends forming a most extensive establishment, comprising cocooneries for the worms, and a manufactory for reeling and weaving silk fabrics.

Rohan Potatoes.

THE real article, just received at the Rochester Seed Store. REYNOLDS & BATEHAM

Rochester, Nov. 3d, 1838.

GOLD versus SILK!!

10,000 CUTTINGS of the genuine Morus Multicaulis trees for sale at a bargain.

These Cuttings are the same as were planted last spring, and produced the trees which are now selling at from 50 *cts.* to $1 each, by means of which many handsome fortunes have been realized. They are of sure growth, and owing to their great value for producing silk, they will doubtless be in good demand for several years. Price for the 10,000 $400,—$5 per 100.

N. B. A few fine trees still for sale. ☞ Speak quick or you miss'em. REYNOLDS & BATEHAM.

Rochester, Nov. 3d, 1838.

The Rohan Potato.

THE subscriber having fully tested the merits of this Potato, by cultivating it for three years, respectfully informs the public that he has now a good supply on hand for sale. Applicants thould send their orders without delay, that they may receive them this fall.

J. A. THOMSON.

Cattskill, October 27th, 1838.–w2tm1t*

Genuine Morus Multicaulis.

THE subscriber has still for sale, one thousand genuine Morus multicaulis, of thrifty growth and untrimmed. They are choice trees, selected for their size, and will afford a large quantity of cuttings. ASA ROWE.

Greece, October 27th, 1838.

Seeds for 1839.

WE are daily receiving our fall supply of SEEDS for the coming season and advices have just been received from London, of the shipment of a large invoice of *English seeds of the present years growth.* They will shortly be received, and we shall then be prepared to supply dealers and others by wholesale or retail, with such articles, and at such prices as cannot fail of giving the fullest satisfaction.

Orders from abroad where the articles are to be forwarded by navigation, should be sent as soon as possible. Those of our friends who have already favored us with their orders may rest assured that their wishes will receive due attention. REYNOLDS & BATEHAM.

Rochester Seed Store, October 27th, 1838.

Merino Bucks for Sale.

I HAVE a quantity of Merino Bucks to dispose of. They are very large for the kind, and heavy fleeces, shearing from 6 to 8 lbs. per head. They are very even fleeced and fine for Merinos. If any of the numerous readers of the Genesee Farmer, wish to purchase, I shall be glad to have them call and see them. The price will be from 5 to 10 dollars. W. GARBUTT.

Wheatland, October 27th, 1838.–w2tm1t*

Chinese Morus Multicaulis, &c.

AT the Linnæan Gardens, Flushing, New-York—65,000 splendid Trees of the genuine Chinese Morus Multicaulis for sale at moderate prices; and also cuttings of the same. None of the *humbug* kind are cultivated at this establishment.

Also, a large supply of the Canton, Alpine or Moretti, Dandolo, Expansa, Broussa, Asiatic, and cuttings in any quantity. Priced catalogues will be sent to every applicant, but a *personal application* will be found far the most satisfactory, and purshasers can then see these superior Trees. Also, Fruit and Ornamental Trees, Plants, and Seeds of every kind, and an immense stock of Bulbous Flower roots, just arrived from Holland.

Applications can be made by mail, and priced catalogues will be sent to all who desire them.

WILLIAM PRINCE & SON.

October 20th, 1838.–6w

Ram Lambs for Sale---Half Blooded. Goord's Improved Kents.

MR. Richard Goord, of Ivade, in Kent, England, having (as Bakewell and Ellman with the Leicesters and Southdowns,) spent a long life in endeavoring to form an improved breed from the Kents, has so far succeeded as to carry off all the prizes at the annual shows, where they have been placed in competition, and has been crowned with all the honors such success meets with in that country. These Sheep at twenty months old, weigh from 32 to 36 lbs. the quarter. There is no larger breed of sheep in England than the Kent. I brought out last year a choice Ram of the Improved Breed, probably the first and only one ever brought to this Continent, and have now some of his Ram Lambs for sale, at from seven to ten dollars each. S. W. SHOTTER.

Pittsford, Monroe Co. N. Y, Oct. 10, 1838.–w3t*

SAXONY SHEEP FOR SALE.

40 RAMS & 60 Ewes of the pure Electoral Saxon Race. The subscriber imported 100 yearling Ewes and a number of Rams in 1827 which were selected by himself from the purest race in Saxony, and with which he commenced his flock, and not only mantained them in all their purity of blood, but improved them in size, symmetry of form, and quantity and quality of wool. The above number of Ewes will either be sold or let for a term of years, and can be increased to 75 or 80 if desired.

H. D. GROVE,

Buskirks Bridge Post Office, Washington Co. N.Y.

August 25, 1838–3m*

A Farm for Sale.

THE subscriber, offers for sale a farm, containing one hundred and sixty-six acres of choice land. One hundred and twenty-five under improvement, and the most of it first rate grain land, situated at Hanover centre, in the county of Chautauque, two miles from Silver Creek Harbor, three from La Grange, four from Irving Harbor, and four from Farrestville.

There are upon the premises, two dwelling houses, one of them a large two story building, with commodious out buildings, orcharding, &c.

This farm is pleasantly situated, the soil of a superior quality, and is considered by competent judges, one of the most desirable farms in the county.

For terms, apply to David Seymour, on the premises, or to the subscriber at Lodi, Erie county.

JOSEPH PLUMB.

September 15th, 1838.–w8m2

Silk Business.

PERSONS who intend doing an extensive business next year with the Mulberries, can be supplied with the *true genuine Morus multicaulis* trees and cuttings, by sending in their orders early. Companies that wish to contract for large quantities, can be supplied on reasonable terms. The trees are to be well packed, so as to be sent to any part of the United States, and delivered this fall. The subscriber has been extensively engaged in the culture of silk for some years, particularly to the production of the Morus multicaulis; and will be happy to give any information respecting the tree or feeding the worm that may be required—silk, worm eggs, &c.

All letters will meet with immediate attention if assingned to EDWARD H. ARNOLD.

Burlington, New Jersey.

N. B. As orders are coming in now, it would be well for those in want to apply early. Aug. 1838.–3m*

MULBERRY TREES.

200,000 GENUINE Mulberry Trees, and as many more as may be wanted, of the most approved kinds—consisting of the best selected varieties now in use for cultivation, feeding worms, and making silk; being acclimated to this country, and adapted to either warm or cold climates, affording a rare opportunity for Companies or individuals to be supplied, from the most extensive collection of Mulberry trees ever seen in any village within the United States.

Autumn is decidedly the best time for removal, and orders left with

Messrs. I. B. Colt, Sec'y of the Connecticut Silk Manufacturing Company, Hartford; Alonzo Wakeman, at the office of the American Institute, No. 187 Broadway, N. Y.; Thomas Lloyd, Jr. No. 236 Filbert street, Philadelphia, Pa.; Luther I. Cox, Baltimore, Md.; B. Snider & Co. Savannah, Ga; Bliss, Jenkins & Co. Mobile, Al.; James Lyman, St. Louis, Mo.; Case & Judd, Columbus. O.; G. Harwood, Rochester, N. Y.; and the publishers of this advertisement, or with the subscriber, in Northamp, ton, Mass.

Orders left with the above gentlemen will be promptly attended to, and each will be furnished with samples of the foliage.

Several valuable farms may be had with or without Mulberry Plantations. Apply at the office of

D. STEBBINS.

Notrhampton, Sept. 1, 1838.–10t*

Sale of Imoved New Leicester Sheep.

40 EWES and RAMS of this celebrated breed will be *Sold by Auction* at the old Norton Farm, East Bloomfield, 5 miles west of Canandaigua, Ontario Co. N. Y., on Wednesday, the 17th of October next; some of which are of those imported in 1834, and the remainder from the said stock breed upon the farm of their present owner: by whom the former were selected from the flocks of the most ancient breeders in England. They will be sold without reserve, either singly or in such lots as purchasers may wish. Liberal credit will be given on approved notes or good security.

September 1, 1838. THOMAS WEDDLE.

Fruit Trees for Sale.

THE subscriber respectfully informs his friends and the public, that he has for sale at his Nursery in Rochester, Monroe county, state of New-York, a large quantity of Fruit Trees, grafted and inoculated with the most approved kinds, now fit for transplanting, which he will sell on the most reasonable terms. SAMUEL MOULSON.

April 15, 1838.

N. B. CASH will be paid for a few thousand two years old APPLE TREES.

Monroe Horticultural Garden & Nurseries, Greece, Monroe County, N. Y.

THIS establishment now comprises over 20 acres, covered compactly with Trees and Plants in the different stages of their growth.

The subscriber offers to the public a choice selection of Fruit Trees, of French, German, English and American varieties, consisting of Apples, Pears, Plums, Peaches, Cherries, Apricots, Nectarines, Quinces, Currants, Gooseberries, Raspberries, Grape Vines, Strawberries, Ornamental Trees, Shrubs, Plants, Hardy Roses, Vines, Creepers, Herbaceous Perennial Plants, Bulbous Roots, Splendid Pæonies, Double Dahlias, &c. &c.

Also, a large collection of Green House Plants, of choice and select varieties, in good condition.

Orders respectfully solicited. Trees and Plants, when ordered, are carefully selected and faithfully packed, and if desired, delivered on the Canal, one mile from the Nursery, or at Rochester.

Orders for Mr. Rowe's Nursery received by the publisher of this paper.

Catalogues will be sent to every applicant, gratis, or may be had by calling at the office of the Genesee Farmer.

April 1, 1838. ASA ROWE.

ELECTION NOTICE.—*Sheriff's Office, Monroe County, Rochester, July 19th,* 1838.—A general election is to be held in the county of Monroe, on the 5th, 6th and 7th days of November next, at which will be chosen the officers mentioned in the notice from the Secretary of State, of which a copy is annexed.

DARIUS PERRIN, *Sheriff.*

State of New-York, Secretary's Office, Albany, July 16th, 1838.—SIR: I hereby give you notice, that at the next General Election in this State, to be held on the 5th, 6th and 7th days of November next, a Governor and Lieutenant Governor are to be elected.

I also give you notice, that a Senator is to be chosen in the Eighth Senate District, in the place of Isaac Lacy, whose term of office will expire on the last day of December. JOHN A DIX, *Secretary of State.*

To the Sheriff of Monroe county.

N. B. The Inspectors of Election in the several towns in your county, will give notice of the Election of a Representative to Congress from the 28th Congressional District. They will also give notice of the Election of Members of Assembly, and for filling any vacancies int. coun officers which may exist. July 28, 1838